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APPLICATION

10

FOR UNITED STATES LETTERS PATENT

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SPECIFICATION

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TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN THAT I, MELVIN E. KNISLEY, a citizen of
25 UNITED STATES OF AMERICA, have invented a new and useful
INFLATABLE PROSTHETIC DEVICE of which the following is a
specification:

INFLATABLE PROSTHETIC DEVICE

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BACKGROUND OF THE INVENTION

Field of the Invention

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The present invention relates to prosthetic breasts and more particularly pertains to a new prosthetic breast that is positionable against the outer surface of a chest and has adjustable size allowances to provide the appearance of a natural breast.

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Description of the Prior Art

The use of prosthetic breasts is known in the prior art. U.S. Patent No. 4,624,671 describes a device that is surgically implanted and whose 20 size may be altered. A general problem with these types of devices is that they require expensive and painful surgeries and these device may eventually fail and require additional surgeries. Another type of prosthetic breast is U.S. Patent No. 3,811,133 having an outer shell which encases wadded fibers for giving weight and structure to the prosthetic device. 25 These types of devices are generally alike in that, in order to attempt to replicate the feeling of a natural breast, they incorporate exotic materials that feel like skin and include expensive filling materials. Because of the materials used, these prosthetics generally cost several hundred dollars.

30 While these devices fulfill their respective, particular objectives and requirements, the need remains for a device that is not only more economical than the previous types of devices, but also allows the user of

the device to selectively, in a safe and efficient manner, to alter the size of the device.

5 SUMMARY OF THE INVENTION

The present invention meets the needs presented above by incorporating a housing, or shell, having the shape of a breast, that is constructed of a latex material. The latex material may be filled with a liquid, preferably water, so that it may be selectively adjusted for size to ensure that it resembles a remaining breast. The use of latex keeps the cost of the device very low while allowing the appearance and general feel of the device to match that of a natural breast when the device is positioned within a bra and covered by clothing.

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Another object of the present invention is to provide a new prosthetic breast that includes an aperture in the front of the housing for easy adjustments of the size of the device while it is against the chest of the wearer of the device.

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Still another object of the present invention is to provide a new prosthetic breast that includes a one-way valve positioned in the aperture to prevent leakages outwardly of the device.

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Yet another object of the present invention is to provide a new prosthetic breast that includes a cloth encasement for positioning over the device to offer the wearer of the device some comfort from the latex and the temperature of the fluid positioned within the housing.

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To this end, the present invention generally comprises a housing having a back wall having a peripheral edge. A front wall is attached to and extends along a length of the peripheral edge such that an inner space

is defined between the front and back walls. The front wall has a convex shape such that the front wall extends outwardly away from the back wall. The housing has an opening therein. The back wall and the front wall comprise a latex material has a thickness generally between .08 mm and 5 2.0 mm. A plug is removably extendable into opening. A fluid may be selectively added into or removed from the housing until the housing has a desired size.

There has thus been outlined, rather broadly, the more important 10 features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto.

15 The objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure.

20 **BRIEF DESCRIPTION OF THE DRAWINGS**

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference 25 to the annexed drawings wherein:

Figure 1 is a schematic perspective view of a inflatable prosthetic device according to the present invention.

30 Figure 2 is a schematic cross-sectional view of the present invention and including a covering of the present invention.

Figure 3 is a schematic perspective view of the present invention.

Figure 4 is a schematic rear perspective view of the present invention.

5 DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the drawings, and in particular to Figures 1 through 4 thereof, a new prosthetic breast embodying the principles and concepts of the present invention and generally designated by the reference 10 numeral 10 will be described.

As best illustrated in Figures 1 through 4, the inflatable prosthetic device 10 generally comprises a housing 12 having a back wall 14 having a peripheral edge 16. A front wall 18 is attached to and extends along a length of the peripheral edge 16 such that an inner space 20 is defined between the front 18 and back 14 walls. The front wall 18 has a convex shape such that the front wall 18 extends outwardly away from the back wall 14. The housing 12 has an opening 22 therein. A plug 24 is removably extendable into opening 22. The plug 24 is conventional, however it is preferred that it includes a flap 26 with a bulbous portion 28 thereon wherein the bulbous portion 28 is extended into and sealed with the opening 22 while the flap 26 is generally flush with the back wall 14. The opening 22 is positioned in the back wall 14. The back wall 14 and the front wall 18 comprise a latex material having a thickness generally between .08 mm and 2.0 mm. The latex has an ultimate elongation capability greater than 400% and a tensile strength greater than 12 Mpa. Ideally, the latex comprises a nitrile polymer of the type used for nitrile examination gloves. Natural rubber latex may also be used, however it has been found that such material may cause allergic reactions and the wear properties of nitrile polymers is such that nitrile is preferred. The back wall 14 has perimeter length generally between 25 cm and 50 cm. A maximum distance between inner surfaces of the front 18 and back 14

walls is generally between 6 cm and 12 cm when the front 18 and back 14 walls are in a relaxed state, meaning that the latex is not being elongated in any direction.

5 The front wall 18 has an aperture 30 extending therein. The aperture 30 is generally centrally located in the front wall 18 and is preferably positioned within a generally circular depression 32 in an outer surface of the front wall 18. An injector 34 for selectively injecting fluid into the housing includes a nozzle 36 fluidly coupled to a container 38, or
10 barrel. The nozzle 36 is removably extendable into the aperture 30 for delivering fluid from the container 38 into the housing 12. The fluid may be forced into the housing 12 using a syringe-type plunger 40 positioned opposite of the nozzle 36. Preferably, the nozzle 36 has the same size as the aperture 30 so that as it is inserted into the aperture 30, a seal forms
15 around the nozzle 36 to prevent leakage around the nozzle 36. Ideally, a one way valve 42 is fluidly coupled to the aperture 30 and is positioned within the inner space 20 for preventing fluid within the housing 12 from exiting the housing 12 through the aperture 30.

20 A covering 44 is selectively positioned over the aperture 30 for closing it. The covering 44 includes a disc member 46 having a shape adapted for positioning within the depression 32, which is preferably circular. The disc member 46 has a greater thickness than a depth of the depression 32 such that the disc 46 extends above the outer surface of the
25 front wall 18 when the disc 46 is positioned within the depression 32. A nub 48 is attached to the disc 46 and is generally centered thereon such that the nub 48 extends away from the housing 12 when the disc 46 is positioned within the depression 32.

A encasement 50, only shown in Figure 2 as a cross-section, is preferably positioned over the housing 12 to protect the wearer of the device from the latex and from the temperature of any fluid within the housing 12. The encasement 50 comprises an elastic cloth material, such 5 as nylon. The encasement 50 has at least one opening 52, and preferably a pair of openings, therein. The opening 52 may be used for removing the housing 12 from the encasement 50, and is preferably aligned with the aperture 30.

10 In use, the housing 12 functions as a prosthetic breast generally for a person who has had a mastectomy. A fluid, preferably water, may be selectively added into or removed from the housing 12 until the housing 12 has a desired size. The desired size is typically that such the housing 12 has the same shape as a remaining breast. Because of variations in breast 15 size, it is preferred that the housing 12 is offered in a plurality of shapes and sizes though the measurements delineated above are considered optimal. The opening 22 may be used for both the quick filling and emptying of the housing 12. Because the opening 22 is closed with a simple plug 24, it is positioned in the back wall 14 so that the wearer's 20 chest will ensure that the plug 24 remains in the opening 22 to ensure that no leaks occur. However, once the wearer has the device 10 in its proper position, adjustments to size may yet be required. This is simply handled with the injector 34 which is used for adding additional fluid, though the injector 34 may also be used for removing fluid as the valve would be 25 opened when the nozzle 36 is inserted into the aperture 30. The covering 44 is an additional insurance measure to prevent leakage of fluid through the aperture 30 while adding to the device 10 the look of an areola and nipple combination of a breast.

30 With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to

include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be
5 encompassed by the present invention.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to
10 limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.